

Ommatophoridæ.

76. *Cyligramma fluctuosa*.

Phalæna-Noctua fluctuosa, Drury, Ins. Exot. ii. p. 24, pl. xiv. fig. 1.

Two worn specimens from Kandra.

77. *Hypopyra capensis*.

Hypopyra capensis, Herrich-Schäffer, Lep. Exot. figs. 121, 122.

Two worn specimens from Kandra.

Pyralidæ.

78. *Zebronia podalirialis*.

Spilomela podalirialis, Guénéé, Delt. et Pyral. p. 231. n. 274.

♂ ♀, Njangabo, 4200 feet, 24th April, 1889.

79. *Cadarena sinuata*.

Phalæna sinuata, Fabricius, Ent. Syst. iii. p. 208. n. 295.

Second camp in Usamba, 24th May, 1889.

Macariidæ.

80. *Macaria incessaria*?

Tephрина incessaria, Walker, Lep. Het. xxiii. p. 962. n. 31 (1861).

One imperfect example from Mpwapwa, Ussagara, 12th November.

It is impossible to be certain of the identification of this moth, as the markings are partly obliterated; but if not identical with *M. incessaria*, it must be very closely related to it.

V.—Notes on the Synonymy of some Species of Scolopendridæ, with Descriptions of new Genera and Species of the Group. By R. I. POCK, of the British Museum (Natural History).

[Plate IV.]

On Scolopendra Gervaisiana and Scopoliana, Koch.

Upon looking into the synonymy of the North-African species of *Scolopendra* I find that much confusion has existed as to the identity of the two mentioned under the above heading. In 1841, in vol. iii. of Wagner's 'Reisen in Algier,'

Dr. Koch described these two species. A perusal of the descriptions and a glance at plate xi. of the Atlas at once reveals two things—firstly that the species are quite distinct, and secondly that the engraver in lettering the plate applied the name *Gervaisiana* to the figure of the species described as *Scopoliana*, and *vice versâ*. In 1845, in vol. xix. of the Trans. Linn. Soc., Newport described a third species from Algeria, to which he gave the name *algerina*. In 1849, in the Expl. Sci. de l'Alg., Lucas redescribed and figured the two species characterized by Koch, and pointed out the engraver's error connected with the plate. So far all was well; but unfortunately, for some unknown reason, this author came to the conclusion that Newport's *algerina* was synonymous with Koch's *Gervaisiana*—an error which becomes apparent as soon as the descriptions are compared. As a matter of fact *algerina* is synonymous with *Scopoliana*. This was mistake number two. But by far the greatest error was committed by Koch himself, who in 1863, in vol. i. of his work 'Die Myriopoden,' absolutely transposed the names of the species that he had previously made known, and described and figured *Sc. Gervaisiana* as *Scopoliana* and *Scopoliana* as *Gervaisiana*. This was probably on account of the mistake originally committed by the engraver of the plates in Wagner's 'Reisen in Algier.' However that may be, in 1881, when Dr. Kohlrausch monographed the Scolopendridæ in the Arch. für Nat., instead of clearing away the obstacles he, apparently misled by Lucas's mistake, added three more difficulties to those that already beset the question—*i. e.* he concluded, in a characteristically sweeping manner, firstly that the three species under discussion, namely *Scopoliana*, *Gervaisiana*, and *algerina*, were identical, and secondly that they were synonymous with *Sc. morsitans* (Linn.); and finally, having thus happily disposed of and forgotten Koch's *Gervaisiana*, he redescribed it under his genus *Cupipes* as a new species named *græcus*.

The full synonymy then of the two species will be as follows:—

Scolopendra Scopoliana, Koch.

Scolopendra Scopoliana, Koch, in Wagner's Reisen in Algier, iii. p. 222, pl. xi. (1841).

Scolopendra algerina, Newport, Trans. Linn. Soc. xix. p. 387 (1845).

Scolopendra Scopoliana, Lucas, Expl. Sci. Alg. i. p. 341, pl. ii. fig. 5 (1849).

Scolopendra Gervaisiana, Koch, Die Myr. i. p. 53, pl. xxiii. fig. 46 (1863). Not *Gervaisiana* in Wagner's Reisen &c. iii. p. 223.

Scolopendra morsitans (Linn.), Kohlrausch, Arch. f. Nat. 1881, p. 104.

Cupipes Gervaisianus (Koch).

Scolopendra Gervaisiana, Koch, in Wagner's Reisen in Algier, iii. p. 223, pl. xi. (1841).

Scolopendra Gervaisiana, Lucas, Expl. Sci. Alg. i. p. 343, pl. ii. fig. 6 (1849), excluding synonymy.

Scolopendra Scopoliiana, Koch, Die Myr. i. p. 39, pl. xviii. fig. 34 (1863).

Not *Sc. Scopoliiana*, Koch, in Wagner's Reisen in Algier, iii. p. 222, pl. xi.

Cupipes græcus, Kohlrausch, Arch. f. Nat. 1881, p. 81.

Cupipes græcus, Meinert, Vid. Medd. Foren. 1884-86, p. 123.

On the Genus *Rhombcephalus*.

Rhombcephalus, Newport, Trans. Linn. Soc. xix. p. 425 (1845).

Since this genus was characterized by Newport it has not been recognized by any author who has worked systematically at the group. This circumstance is easily explained by the fact that the genus was based upon a character which results mainly from the drying of immature examples of *Scolopendra*.

In the British Museum there are three types of this genus; these are *Rh. viridifrons* from France, which proves to be the young of *Scolopendra cingulata*; *Rh. parvus*, Newport, from Malta, is also a young example of *Scolopendra cingulata*; *Rh. smaragdinus*, Butler, from Rodriguez, is the young of *Scolopendra subspinipes*, Leach. Thus, since the type of the genus *Rh. viridifrons* is a specimen of *Sc. cingulata*, *Rhombcephalus* must be a synonym of *Scolopendra*.

The other typical examples, which I have not seen, will probably prove upon examination to be the young of the species of *Scolopendra* or *Cormocephalus* common in the locality from which the types were obtained.

On *Euryolithobius Slateri*, Butler.

Euryolithobius Slateri, Butler, Phil. Trans. Roy. Soc. clxviii. p. 499 (1879).

This genus and species were based upon the exuviated cuticle of a specimen of *Scolopendra morsitans*. The names must consequently be added to the long list of synonyms already appertaining to this widespread form.

On *Cupipes Guildingii* (Newport).

Cormocephalus Guildingii, Newport, Trans. Linn. Soc. xix. p. 425.

Ostigma cormocephalinum, Pocock, Ann. & Mag. Nat. Hist. (6) ii. p. 473, pl. xvi. fig. a.

In May of 1889 I was enabled, through the kindness of

Prof. Westwood, to examine the type of *Cormocephalus Guildingii*, which is preserved in the Hope Museum at Oxford. I at once recognized that the species is referable to the genus *Cupipes*, and moreover that, misled by the absence of the anal legs, I had redescribed a specimen of it as a new species, *Otostigma cormocephalinum*.

On Otostigma spinicauda (Newport).

Branchiostoma spinicauda, Newport, Trans. Linn. Soc. xix. p. 412, pl. xl. fig. 7 (1845).

Otostigma deserti, Meinert, Vid. Medd. Nat. Forening, 1884-86, p. 121.

An examination of Newport's type of this species shows that it is not referable to the genus *Branchiostoma*, or *Rhysida* as it should be called, inasmuch as there are no spiracles in the seventh somite. It is in fact a veritable *Otostigma*, having the ear-shaped stigmata, spurred tarsi, produced pleurae, and simple, not sulcate, head-plate which are so characteristic of the genus.

Ot. deserti of Meinert, from Biskra, is, I feel confident, the same species, the only difference that I can detect being the presence of two spines on the under surface of the femur of the anal leg in *Ot. deserti*, whereas in specimens of *Ot. spinicauda* from Tripoli there are either three or four spines in this position. Analogy, however, justifies the conclusion that this character cannot be regarded as of specific importance.

On Monops nigra (Newport).

Cryptops nigra, Newport, Trans. Linn. Soc. xix. p. 408.

Monops nigra, Gervais, Ins. Apt. iv. p. 294.

Newport described this species from a figure on pl. xc. of the unpublished drawings by Major-General Hardwicke of the Spiders (and Myriopods) of India. Consequently Gervais's assertion that the typical specimen is preserved in the British Museum is erroneous. There is no type, unless the figure be regarded as such.

It is difficult to conceive why Newport should have regarded that figure as representing a *Cryptops*. There is little or nothing of a *Cryptops* about it. It is quite true that in the rough drawing that is given of the under surface of the head no prosternal plates are represented; but the form of the maxillary feet is so totally unlike anything known in the Chilopoda—the appendage being figured as a single stout internally serrate tooth—that no reliance is to be placed upon this drawing. Again, with regard to the eyes: Newport quite

correctly described the *figure* as being furnished with a single eye on each side, and on the strength of this statement Gervais established the genus *Monops* for the reception of the species. But there is not a particle of evidence that the specimen from which the figure was taken was provided with *only* one eye. The drawing which justified Newport in making mention of the eyes at all is the one above referred to of the underside of the head. But, when viewed from this aspect, *all* the four eyes of a Scolopendrid *cannot* be seen. Only two are visible, and these, when examined carelessly with the naked eye or even with a lens of low power, appear as a single black patch; and that General Hardwicke, when painting this figure, did make only the most superficial examination of his specimen, is shown by the manner in which he drew parts so conspicuous as the maxillary feet.

Furthermore, that the specimen did not belong to the *Cryptops* group is clearly manifested by an enlarged drawing that is given of one of the legs. This shows that the tarso-metatarsus was composed of two distinct segments, of which the distal is much shorter than the proximal. In *Cryptops* and its allies the tarso-metatarsus is undivided, except in the case of the posterior two pairs of legs. But when they are divided the segments are subequal in length and not manifestly unequal, as in this *Monops niger*.

In conclusion, I may add that, after carefully examining the figure, I have no doubt that it was taken from some specimen either of *Otostigma* or *Rhysida*; but since this is a point which will probably never be definitely settled, and considering, too, the circumstances under which the genus was established, I have thought it superfluous to introduce *Monops* into the accompanying key of genera.

Descriptions of new Species.

Heterostoma longicauda, sp. n. (Pl. IV. figs. 1-1 b.)

Heterostoma longicauda, Newport, MS.

Body robust; widest at the fourteenth tergite, from the fourteenth narrowed posteriorly to the twenty-first and anteriorly to the fourth, the first very wide.

Colour deep reddish brown, the posterior margin of the tergites with a greenish or ochraceous tinge; legs and antennæ ochraceous; shining.

Head-plate cordate, smooth, very finely punctured.

Antennæ moderately long, composed of twenty segments, whereof the basal four are bare, the rest pubescent.

Maxillary sternite smooth, sparsely and finely punctured; prosternal plates large, quadrate, each furnished with three conical teeth, of which the internal may be bifid.

Tergites feebly punctured, from the third bisulcate, from the seventh marginate, lightly wrinkled.

Sternites scarcely bisulcate, the sulci being very faint, anteriorly and posteriorly abbreviated, and deserving rather to be called impressions than sulci; marked posteriorly with a median and two fainter lateral circular impressions.

Anal somite.—*Tergite* much wider than long, not sulcate, in one specimen with a low median anterior ridge, in the others quite normal; *pleuræ* very long, reaching to the middle or nearly to the end of the femur, more or less rounded, densely porous, with a widely bifid extremity, a single lateral spine, no superior spines; *sternite* with posteriorly converging margins and deeply excised posterior margin; *legs* of normal form; femur usually armed with seven strong spines—2, 2 on the upper inner edge, 1 on the under inner edge, and 2 on the under outer edge, the process very long, sharp, and simple; claw armed basally with two very minute spurs.

Legs with the first tarsal segment (sometimes including the twentieth pair) armed with a spur.

Measurements in millimetres of largest specimen:—Total length 134; width of fourteenth tergite 16, of fourth 11, of first 15, of twenty-first 10·5, of head 11; length of anal leg 34, of femur 12, of pleura 15.

Three specimens from India (*Mr. Barnes*) and two from Ceylon (*R. Templeton*).

This species is related to *H. platycephalum* of Newport, but may be recognized by the very long sharp process and the small number of spines on the anal femur, by the wide space separating the apical spines of the pleuræ, by the absence of a superior spine on these organs, &c.

In one specimen the number of spines on the anal femur falls as low as five, two being wanting on the upper inner edge.

Heterostoma viridipes, sp. n. (Pl. IV. fig. 2.)

Body robust posteriorly, slender anteriorly.

Colour olivaceo- or ochraceo-castaneous, antennæ and distal segments of the legs with olivaceous tint.

Head-plate small, a little wider than long, punctured.

Antennæ of moderate length, attenuate, composed of twenty segments, whereof the basal four are naked, the rest pubescent.

Maxillary sternite punctured, with a short anterior sulcus; prosternal plates normally developed, each bearing three distinct teeth.

Tergites.—The first narrower, equal in width to the seventh; from the third very faintly bisulcate, from the fifth or sixth marginate.

Sternites marked with a posterior median impression, which is more pronounced at the anterior end of the body, and with two sulci, which are more distinct at the posterior end of the body.

Anal somite.—*Tergite* normal, wider than long; *pleuræ* moderately elongate, projecting beyond the middle of the femur, tolerably stout, armed with two small contiguous apical spines, two small lateral spines, and one small superior spine; *sternite* medianly impressed, narrowed behind, with emarginate posterior border; *legs* of average length, stout, the femur armed with eleven spines (including the short spiniform process)—three on the upper inner edge, two on the inner surface, two and one on the under inner edge, and three on the under outer edge; patella and tibia much rounded and swollen beneath and on the inner surface, the swollen part being of an olivaceous hue, contrasting strongly with the castaneous tint of the rest of the appendage; claws armed with minute basal spurs.

Legs (including the twentieth pair) with proximal tarsal segment spurred.

Measurements in millimetres of largest specimen:—Total length 11·3; width of head 8·5, of first tergite 10·3, of fourth (narrowest) 9, of fourteenth (widest) 13, of last 9; length of anal pleura 11, of entire leg 25·5, of femur 8·7, of patella 7·3, width 3·3; length of tibia 5, width 2·3.

Two specimens from Ternate (*H.M.S. 'Challenger'*).

This species is very closely allied to *H. platycephalum* of Newport (= *Brownii*, Butler), but differs from all the specimens of this last-named that I have examined in being decidedly less flat- and wide-headed, in having a spur on the tarsus of the preanal legs, in having shorter and stouter anal pleuræ, and distinctly stouter anal legs. Of these characters, however, the only one upon which I place much reliance is the form of the anal legs. In *H. platycephalum* the patella and tibia of these appendages are evenly cylindrical, and not internally and inferiorly swollen, so that their greatest width amounts to about one third of their length; whereas in *H. viridipes* the width is almost equal to half the length. This difference may prove to be a sexual character.

Heterostoma rubripes (Brandt), var. *grossipes*, var. nov.
(Pl. IV. figs. 3, 3 a.)

Heterostoma grossipes, Newport, MS.

Body slender anteriorly, stout posteriorly.

Colour castaneous, legs paler.

Head-plate cordate, a little wider than long, punctured.

Antennæ (broken) with the four basal segments bare.

Maxillary sternite punctured, anteriorly depressed; prosternal plates long, each furnished with three strong teeth, whereof the internal is subdivided.

Tergites smooth, from the third bisulcate, from the fifth marginate.

Sternites smooth, the anterior ones medianly impressed posteriorly, ? bisulcated (the plates being much wrinkled by drying).

Anal somite.—Tergite wide, of normal form; pleuræ of moderate length, closely porous, with two close-set apical spines, about five minute superior spines, and two lateral spines; sternite narrowed behind, with emarginate hinder border; legs very stout, the width of the segments being equal to half their length; femur armed with eight or nine spines (including the short spiniform process), five or four on the upper inner edge and inner surface, two on the under inner edge, and two on the under outer edge; claw with basal spurs.

Legs with claws and first tarsal segment spurred.

Length 80 millim.; width of head 7 millim., length 6·3; width of anal tergite 8·5; length of anal leg 19; length of femur 7, width 3·6; length of patella 5·5, width 3.

A single specimen from Sunday Island.

I consider this form to be merely a variety of *H. rubripes*, Brandt. It differs from the typical *H. rubripes* in having thicker anal legs with fewer spines on the femur.

ETHMOPHORUS, gen. nov.

(ἔθμος, a sieve, and φέρω, so called from the form of the stigmata.)

It is needless to characterize this new genus at length, since it only differs from *Heterostoma* in the form of its maxillary feet.

In *Heterostoma* the prosternal plates are enormously large and strongly dentate and the femoral segment of the appendage has no internal tooth.

In *Ethmophorus*, on the other hand, the prosternal plates

are small and weakly dentate and the femoral segment of the appendage is furnished with a distinct internal tooth.

In fact, this new genus appears in a way to connect the genus *Heterostoma* with *Rhysida* and *Trematoptychus*.

Ethmophorus monticola, sp. n. (Pl. IV. figs. 4, 4 a.)

Body flat, stout, widest at the twelfth somite, much narrowed anteriorly, slightly so posteriorly, the first tergite only moderately wider than the second.

Colour of tergites piceous, with a tinge of violet; head, first tergite, maxillary feet, and anal pleuræ obscurely castaneous; antennæ ochraceous; sternites and legs olivaceous, the latter with the distal segments ochraceous.

Head-plate small, about as wide as it is long, feebly punctured.

Antennæ (fractured), with the four basal segments naked.

Maxillary sternite and feet feebly punctured, the prosternal plates very small, like those of, *e. g.*, a *Scolopendra*, each furnished with four obscurely defined obtuse teeth; femoral segment of the jaws furnished with a well-developed subdentate basal tooth, as in, *e. g.*, *Scolopendra*.

Tergites lightly wrinkled mesially and laterally, from the third bisulcate, from the seventh marginate.

Sternites not bisulcate, marked with three faint impressions, two lateral, representing the sulci, and one posterior and median.

Anal somite.—Tergite wider than long, wider behind than in front; pleuræ long, slender, rounded, finely porous, reaching almost to the end of the femur, terminated by two spines, whereof the inferior is much the larger, either with or without a small superior spine and with one or two minute lateral spines; sternite with a median impression and very strongly emarginate hinder border; legs of moderate length, normally slender, with cylindrical segments, the femur armed with a simple, short, spiniform process, and with three spines beneath, one minute and internal, and two in the middle and at the posterior end, one large, the other very minute and behind it; patella and tibia normal (tarsal segments absent).

Legs.—Claws armed with two spurs; tarsi of the preanal legs unarmed, tarsi of the rest with a single spur.

Measurements in millimetres:—Total length 123; width of twelfth tergite 12, of first 10, of twenty-first 8.3, of head 8.5; length of pleura from the apex to point of attachment with tergite 8.5; length of anal femur 9.5.

A single specimen obtained by Mr. J. Whitehead on Mount Kina Balu in North Borneo.

In its long anal pleuræ this new species resembles those species of *Heterostoma* of which *platycephalum* may be regarded as the type. The spine-armature of the anal leg, as it has been described, may be abnormal, for one leg is entirely missing and the other is damaged.

Rhysida longicornis, sp. n. (Pl. IV. fig. 5.)

Body slender and nearly parallel-sided.

Colour (in alcohol) wholly ochraceous, shining.

Head-plate sparsely punctured, not sulcate.

Antennæ very long, reaching when stretched laterally to the end of the eighth tergite, composed of twenty-one long cylindrical segments, whereof the basal three are bare and the rest pubescent; in the distal half the segments are at least twice as long as wide.

Maxillary sternite entire, feebly punctured; prosternal plates, in contact, wider than long, the anterior edge convex and bearing four blunt conical teeth; basal tooth prominent and subdentate.

Tergites smooth, from the fifth bisulcate, from the tenth or eleventh marginate.

Sternites smooth, sparsely punctured, not completely bisulcate, there being only two very short sulci quite on the anterior portion.

Anal somite.—*Tergite* not sulcate, with raised lateral margins; *pleuræ* densely porous, furnished with a long stout process which is armed with one strong lateral spine, one or two small superior spines, and three strong apical or subapical spines; *sternite* narrowed posteriorly, with emarginate border; *legs* long and slender, femur armed with from ten to thirteen strong spines, that is six or four in an irregular series on the upper inner edge, four or three on the under inner edge, and three on the under outer edge; there is no spinous process and no spine in the position of the process; tarsal segment unspined; claws with basal spurs.

Legs.—From the seventeenth to the twentieth pairs each with a single tarsal spur, the sixteenth to the first with two tarsal spurs, the third with a tibial spur (second pair absent), the first with a tibial and a patellar spur; claws of all bicalcarate.

Stigmata of normal form.

Length about 43 millim., of antennæ 12 millim.

A single specimen from Socotra, collected by Prof. I. B. Balfour.

Allied to the widespread *Rh. longipes* of Newport, but differing in its much longer antennæ and in the irregular arrangement of the spines on its anal femora (there being no apical spine).

Rhysida calcarata, sp. n. (Pl. IV. figs. 6, 6 a.)

Body slender, almost parallel-sided.

Colour olivaceo-ochraceous, legs testaceous; shining with submetallic lustre.

Head-plate sparsely punctured.

Antennæ long, composed of seventeen to twenty-one segments, whereof the basal three are bare, the rest pubescent, the segments much shorter than in *Rh. longicornis*.

Maxillary sternite entire, sparsely punctured; prosternal plates wider than long, almost in contact, each bearing four teeth; basal tooth well developed and subdentate.

Tergites smooth, from the fourth bisulcate, from the eleventh or twelfth with raised margins.

Sternites smooth, bisulcate, the sulci extending considerably past the middle of the plate, but becoming indistinct posteriorly.

Anal somite.—Tergite not sulcate and not impressed behind; pleurae densely porous, with well-developed somewhat slender process, which is armed with one lateral and four apical or subapical spines; sternite narrowed posteriorly, with almost straight or lightly concave hinder border; legs somewhat short; femur armed with about fifteen spines—six or seven in two rows on the upper inner edge, two to four on the under inner edge, and from three to five on the under outer edge; the posterior process is well developed, in one specimen (? ♀) it is short, very wide, and armed with eight or ten spines, in two others (? ♂) it is long, slender, cylindrical, blunted, and armed with five or six spines; tarsus not spined; claw with two basal spurs.

Legs.—Twentieth pair either with or without a tarsal spur, nineteenth to seventeenth with one tarsal spur each, sixteenth to first with two tarsal spurs; first pair with a spine upon the femur, patella, and tibia; claws of all the legs spined.

Three specimens from Cambodia; one of these, measuring 57 millim., is larger than the others, has the antennæ composed of seventeen segments, the anal legs more slender and the femoral process short and wide; in the others measuring about 36 millim., the antennæ are composed of twenty-one segments, the anal legs are stouter, and the femoral process much longer. I suspect that the last two are the males and

the first a female of one and the same species. It is a well-marked form resembling *Rh. longipes* in some respects, such as in possessing marginate tergites and spined anal legs. It differs, however, from this species in having bisulcate sternites and a well-developed spinous process on the anal femur.

Scolopendra (?) *cuivis*, sp. n. (Pl. IV. fig. 7.)

Colour (dry specimen) ochraceous, posteriorly more castaneous, anteriorly olivaceous.

Body robust, narrowed anteriorly, but with very wide maxillary feet and sternite.

Head-plate small, flat, ovate, slightly longer than wide, distinctly punctured, with a posterior median fine stria or ridge.

Antennæ (imperfect, with fourteen segments) attenuate, segments cylindrical, the basal five or six bare.

Maxillary sternite very wide, punctured, with a slight median longitudinal depression and an anterior depressed area; prosternal plates moderately long, not wide, in contact, each bearing four teeth, of which the three internal are more or less fused; basal tooth on a level with the prosternal plates, well-developed and subdentate; claw very stout, powerful and curved.

First tergite meeting but not covering the head-plate, marked in front with a conspicuous but fine transverse sulcus; rest of the tergites smooth and (except the last) strongly bisulcate, from the eleventh strongly marginate.

Sternites smooth and strongly bisulcate.

Anal somite not so wide as the twentieth somite; *tergite* strongly margined laterally, with a fine median longitudinal sulcus, posteriorly depressed in the middle; *pleuræ* very finely porous, with one posterior superior spine, the process short but distinct, and armed with four strong spines; *sternite* much narrowed behind, mesially depressed, with straight hinder border; *legs* punctured, short, thick, and more or less in contact, with a notch in the middle of the superior posterior margin of the first three segments; the femur armed on its inner and under surface with from fifteen to eighteen spines; the process stout at the base, pointed at the apex, which is tipped with either four or two spines; claw short, basally spurred.

Legs with claws basally spined and the proximal tarsal segment bearing one inferior spur.

Length about 90 millim.; width of head-plate 6, of maxillary sternite 8·6, of anal tergite 8·2.

Locality doubtful. The specimen was taken from a bottle labelled 'India and S. America.'

It is not easy to point out the affinities of this species, because I am unable to determine its exact generic position. In the sum of its characters, however, it seems to come nearest to *Scolopendra*, although the head-plate does not overlap the anterior portion of the first tergite. One of its most marked features is the great stoutness of the anal legs.

Cormocephalus Willsii, sp. n.

Body robust and parallel-sided.

Colour olivaceous or ochraceous, head and anal tergite ferruginous; shining.

Head-plate convex, wider than long, coarsely punctured, with two posterior diverging sulci.

Antennæ of moderate length, composed of seventeen segments, whereof the basal eight are bare, the rest pubescent.

Maxillary sternite coarsely punctured, slightly depressed and striated in the middle line, marked in front with transverse, more or less branching striæ and a short median longitudinal stria; prosternal plates well developed, parallel, almost in contact, each armed with four or five conspicuous teeth; maxillary feet also coarsely punctured, with a well-developed basal subdentate tooth.

Tergites.—First coarsely punctured, not sulcate; the second with two very faint abbreviated sulci; the third with the sulci still incomplete; the fourth to the twentieth completely bisulcate; the seventh to the twentieth marginate and lightly wrinkled laterally, all of them punctured.

Sternites smooth, punctured, bisulcate.

Anal somite.—*Tergite* not marked by a median sulcus; *pleuræ* coarsely porous, the process well-developed and terminated by two spines, one spine in the middle of the hinder border; *sternite* much narrowed posteriorly, with straight hinder border; *legs* somewhat short, moderately slender; femur armed with about eleven strong spines (not including the process, which is well developed and bifid), three or four on the inner surface, two on the under inner edge, and four or five in two longitudinal series on the under outer edge; claws not basally spurred.

Legs with first tarsal segment unarmed; claws furnished basally with two spurs.

Length up to 65 millim.

Locality Madagascar. Two specimens collected by the Rev. R. Baron and one by the Rev. J. Wills.

This species differs from all the South-African forms described by Porath in not having the anal tergite marked by a longitudinal sulcus. This I believe is the first record of the genus from Madagascar.

Cormocephalus cupipes, sp. n. (Pl. IV. fig. 8.)

Body slender, widest at its posterior end.

Colour (dry specimens) olivaceo-ochraceous above; under surface and maxillary sternite much paler; antennæ and distal segments of the legs olivaceous.

Head-plate elongate, ovate, slightly longer than wide, sparsely but somewhat coarsely punctured, marked in its posterior half by two anteriorly diverging sulci.

Antennæ long and slender, composed of seventeen segments, whereof the basal six are naked and the rest pubescent.

Maxillary sternite sparsely but coarsely punctured; prosternal plates elongate, in contact, each bearing four well-defined sharp teeth; basal tooth long, sharp, and subdentate.

Tergites, except the first and last, conspicuously bisulcate, from the fifth or sixth marginate.

Sternites strongly bisulcate and furnished in addition in the anterior portion of the middle with a median longitudinal impression.

Anal somite.—*Tergite* with a conspicuous median sulcus, wider than long, its posterior border evenly convex and not produced in the middle; *pleuræ* very narrow, coarsely punctured, the process very short, conical, and bearing two apical spines; there are no lateral or superior spines; *sternite* long and narrow, nearly twice as long as the basal width, with a conspicuous median longitudinal impression; *legs* very short and very stout, not very much longer than those of the twentieth somite, stout at the base and evenly attenuated towards the apex, very coarsely punctured, the three basal segments more or less flattened above, with feebly developed posterior marginal notches, the two femora together nearly as wide as the tergite, in contact throughout in the middle line, each armed with three spines in an irregular series on the upper inner edge, two on the inner surface, two on the under inner edge, and four in two series on the under outer edge; the process short, conical, and tipped with two spines; the median part of the under surface without spines and markedly excavated in front; patella rounded laterally and beneath; tibia with its upper surface bearing two longitudinal depressions separated by a median ridge; in one specimen there is a depression on the inner surface of this same

segment; tarsal segments short and cylindrical; claw small, short, not inferiorly serrate, without spurs.

Legs with tarsi unspined; claws with two basal spurs.

Length 43 millim.

Two specimens from Natal, collected by Gueinzus.

In the thickness of its anal legs this species resembles *Cupipes*. I refer it, however, to *Cormocephalus* for the following reasons:—There are no sulci on the first tergite, the anal pleuræ are provided with a short process, the spine-armature of the anal femora is like that of a typical *Cormocephalus*, and the claw of the anal leg is not serrate beneath and small, being shorter than the first tarsal segment of this appendage.

Of the South-African species already described it perhaps comes nearest to *C. rugulosus*, Porath. But this form, as its name implies, is rugulose. Moreover, judging from Dr. Porath's description, which makes no mention of any peculiarity in the structure of the anal legs, these appendages are normally formed in his species.

Cormocephalus inermipes, sp. n. (Pl. IV. figs. 9, 9 a.)

Body moderately robust, parallel-sided.

Colour (dry specimen) olivaceous, with metallic lustre.

Head-plate cordate, slightly wider than long, somewhat coarsely punctured, with two posterior anteriorly diverging sulci.

Antennæ short, slender, attenuate, composed of seventeen segments, whereof the basal six are naked, the rest pubescent.

Maxillary sternite wide, entire, and coarsely punctured; prosternal plates widely separated, each furnished with four teeth, one external, separate, and posterior, three internal, fused and projecting—the distance between the plates is almost equal to the width of one of them; basal tooth prominent and subdentate.

Tergites punctured, smooth, from the second strongly bisulcate, from the fifth or sixth marginate.

Sternites smooth, strongly bisulcate.

Anal somite.—*Tergite* much wider than long, marked in its posterior half with a faint longitudinal sulcus; *pleuræ* closely porous, the process long, slender, and tipped with two strong spines; no lateral or superior spines present; *sternite* much narrowed posteriorly, with straight hinder border; *legs* moderately long and very stout, almost in contact; femur not twice as long as it is wide, armed with nine or ten spines (not including the process)—one on the upper

inner edge, two or three on the inner surface, two on the under inner edge, and four in two rows on the under outer edge; the process very short and tipped with two or three spines; patella about as wide as it is long; tibia a little longer than wide; the claw long, as long as the last tarsal segment, not spurred.

Legs with tarsi not spurred; claws of all the legs *unspined*. Length 45 millim.

A single specimen from Ceylon (*R. Templeton*).

This species is evidently allied to *C. sarasinorum*, Haase, of which the Museum possesses two specimens from Ceylon. It differs, however, as it does from all the other species of the genus, in that the claws of all the legs are unspined. Moreover the prosternal plates are very widely separated; but I do not care to lay too much stress upon this character, seeing that it may be the result of accident and not normal.

Cormocephalus dentipes, sp. n. (Pl. IV. fig. 10.)

Colour (of dried and faded specimen) testaceous; head and pleuræ ochraceous; when fresh the specimen was probably ochraceous, with castaneous head and pleuræ.

Head subcircular, with conspicuous posterior sulci; basal lamina visible.

Antennæ short, attenuate, composed of seventeen cylindrical segments, whereof the basal four or five are bare, the rest pubescent.

Maxillary sternite and feet more or less rugulose, the sternite irregularly grooved longitudinally and of a deeper colour centrally and posteriorly than anteriorly and laterally; prosternal plates well-developed, wide and long, each bearing four distinct teeth, whereof the external one is sharper and separated and the three internal blunter and more or less fused.

Tergites smooth, with the exception of the last, but including the first, strongly bisulcate; from the thirteenth distinctly marginate.

Sternites conspicuously bisulcated.

Anal somite.—*Tergite* wider behind than in front, the margins rounded anteriorly and converging, without a median sulcus; *pleuræ* closely and somewhat coarsely porous, the process smooth and short, terminated by two strong spines and bearing one lateral superior spine; *sternite* much narrowed posteriorly, with straight hinder border and rounded posterior angles; *legs* of moderate thickness and length, not including the posterior internal process, which is short and tipped with two strong spines, armed with about seventeen

conspicuous spines—three on the anterior half of the upper inner edge, five in a posteriorly ascending series on the under inner edge, three defining the internal boundary of a smooth very lightly depressed area which occupies the middle of the under surface of the segment, three bounding this area externally, and three or four on the under outer edge; posteriorly beneath the segment is obsoletely tubercular; patella flat above, distinctly tubercular internally and beneath, tibia similarly but more thickly and more strongly tubercular, distinctly sulcate above; proximal tarsal segment lowly tubercular throughout; distal tarsal segment obsoletely tubercular anteriorly; claws with spines at the base.

Legs with spined claws but unarmed tarsi.

Length about 42 millim.

A single specimen from Bengal.

This species is so remarkable for the peculiar tubercular armature of its anal legs that no further feature need be mentioned as characteristic of it.

Cormocephalus lævipes, sp. n.

Body tolerably robust, slender anteriorly.

Colour chocolate-brown; anal legs ferruginous, rest of the legs and antennæ with greenish tint; shining.

Head-plate punctured, with two posterior sulci.

Antennæ broken, slender, the basal five segments bare.

Maxillary sternite coarsely punctured, anteriorly sulcate; prosternal plates well developed, converging, about as long as wide, each bearing four blunt teeth, whereof the external one is separated; basal tooth well developed, subdentate.

Tergites.—The first punctured with anteriorly and posteriorly abbreviated vestiges of two sulci; from the second bisulcate, from the sixth marginate, lightly wrinkled mesially and laterally.

Sternites strongly bisulcate.

Anal somite.—*Tergite* wider than long, with a complete median sulcus and raised margins; *pleura* densely prours, the process short, stout, blunt, and tipped with two minute close-set spines, no lateral or superior spines; *sternite* narrowed posteriorly, with converging sides, rounded lateral angles, and straight posterior margin; *legs* short, somewhat stout, coarsely and closely punctured, the segments rounded, smooth; the femur furnished with two minute spinules on the upper inner edge, two or one on the inner surface, two on the under inner edge, and two in the position of the process, which is absent; claw furnished with two spines.

Legs with tarsi not spurred; all the claws armed basally with two spurs.

Length about 80 millim.

A single specimen from Lord Howe's Island (*H.M.S. 'Herald'*).

In possessing spurred claws to its anal legs and a median sulcus on its anal tergite this species resembles *C. aurantiipes* and *C. subminiatus* (= *miniatus*) of Newport; but it may be at once recognized by the punctures and small spinules on its anal legs, by the short, stout, pleural process, &c.

[To be continued.]

VI.—*Description of Two new Species of Parrots of the Genus Cyanorhamphus in the British Museum.* By T. SALVADORI, C.M.Z.S.

Cyanorhamphus cyanurus.

Similar to *C. novæ zeelandiæ*, but larger and with the tail blue; the two central tail-feathers are tinged with green on both webs, the remainder only on the outer webs, towards the base; under wing-coverts and also the longest under tail-coverts tinged with blue; tail underneath dusky olive, darker than in *C. novæ zeelandiæ*; bill black, with the base of the maxilla silvery grey; feet dusky. Total length 12·7 inches, wing 6·6, tail 6·5, bill 0·8, tarsus 0·82.

Hab. Raoul Island, Kermadec group (*Voy. H.M.S. 'Herald'*).

Cyanorhamphus subflavescens.

Intermediate between *C. Cooki* and *C. Saisseti*; about the size of *C. Cooki**, and very much like it in colour, but of a more yellowish tinge, especially on the underparts, and with the red on the head much reduced and nearly confined to the forehead; the red spot on the ear-coverts not very conspicuous, those on the sides of the rump much extended; the lower part of the cheek-feathers yellowish as in *C. Saisseti*, from which the present species differs in being stronger and larger, notwithstanding its shorter tail; the upper parts have a slightly more yellowish tinge, while the underparts have the yellow tinge greener; the primaries are less blue and more green, especially towards the apical half of the outer webs; tail below golden-olive with no greyish tinge, the tips of the tail-feathers not contrasting with the rest; bill bluish black, with the base of the maxilla silvery grey; feet dusky brown. Total length 12·7 to 11·3 inches, wing 5·8 to 5·7, tail 6 to 5·5, bill 0·86 to 0·73, tarsus 0·88 to 0·83.

Hab. Lord Howe Island (*Voy. H.M.S. 'Herald'*).

* Having compared the types, I have been able to identify *C. Cooki* with *C. Rayneri* from Norfolk Island.

